A B S T R A C T

The invention provides a routing method for a
multiplex system having N inputs each designed to receive
one of N input multiplexes each having M input channels,
each of the channels serving to transport an input
packet, and N' outputs each serving to generate one of
the N' output multiplexes each made up of output channels
each serving to transport an output packet, each of the M
channels in use in the input multiplex comprising a data
packet associated with an input header serving firstly to
identify the packet and secondly to specify at least one
output to which it is to be routed, wherein each of the
N' output multiplexes has M+L channels where $L \geq 0$, and
wherein the method implements the following operations:

· for the data, multiplexing N input channels each
having M multiplexed packets so as to generate an
aggregate multiplex signal comprising all of the data
packets representing the N input multiplexes; and

· for each of the N' outputs, providing the inputs
of M+L parallel selection chains with access to the
aggregate multiplexed signal;

· for the input headers, performing demodulation and
decoding;

· for the output headers, performing encoding and
modulation on the basis of the demodulated and decoded
input headers; and

· for the headers and the data, selecting from $\underline{n}$ of
the M+L selection chains corresponding to the kth output
on the basis of the input headers corresponding to $\underline{n}$
packets that are to be routed to the kth of the N'
outputs, the corresponding $\underline{n}$ data packets in the
aggregate multiplexed signal and multiplexing these $\underline{n}$
data packets with an output header in order to generate
the kth output multiplex, where k = 1, 2, ..., N'.